

Remarks

The Final Office Action dated January 3, 2006 has been carefully considered.

Claims 1 and 3-9 are rejected under 35 U.S.C. 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,562,743 to Cook et al. The present invention, as set forth in Claims 1 and 3-9, is directed to a superabsorbent polymer particulate including an aqueous coating of a monovalent, divalent, trivalent or higher salt wherein the aqueous coated superabsorbent polymer particulate has a delayed free water absorption property of absorbing about 13 grams or less of water per gram of superabsorbent polymer in about 15 seconds.

In general, superabsorbent polymers are designed to use the fast absorption properties of the polymer in such applications as diapers. However, in a wet-laid process, there is a mixing of an aqueous slurry of superabsorbent polymer with fiber, which results in water being absorbed during the wet-laid process. Consequently, a superabsorbent polymer that includes a property that delays the absorption is desirous for wet-laid processes. This is described in the present specification on page 10, lines 14 to page 11 line 2.

In the present Office Action, the Examiner states that "Cook et al. teaches a process of improving core permeability of superabsorbent particles by coating the surface of said particles with polyvalent ion salts (col 10 lines 20-25) A such as those containing calcium, aluminum, and iron (col. 4, lines 57-61), halides and sulfates (col 5 line 1). Aluminum chloride and aluminum sulfate are preferred (col. 5 line 37)." The implication of these statements is that the coated superabsorbent polymer as disclosed in Cook et al. has a faster absorption rate, not a delayed absorption rate of the present invention.

With all due respect to the Examiner, Cook et al does not disclose a process of improving core permeability of superabsorbent particles. Starting with the Abstract, Cook et al discloses absorbent structures including fibers bound with polyvalent cation-containing compound and superabsorbent polymer particles. In the last sentence of the Abstract, Cook et al discloses methods for preparing absorbent structures including treated fibers; structures including fibers combined with a polyvalent cation-containing compound; and methods for treating or coating SAP particles with polyvalent cation-containing compounds.

The statement “improving core permeability of superabsorbent particles” in the Office Action is inconsistent with the teaching of Cook et al. Reference is made to col 2 lines 52-54 of Cook et al. wherein it states “As used in this specification, SAP particle permeability is distinguished from the permeability of the “core” or absorbent structure.” Cook et al. does not disclose a process of improving core permeability of superabsorbent particles. Cook et al specifically discloses a process of improving core permeability as defined in the reference. Permeability is defined in Cook et al. at col 2, lines 50-52 to mean “the ability of liquid to permeate the particle to the center, thereby fully utilizing the capacity of the SAP particle.”

As stated above, Cook et al is directed at increasing the permeability of the core structure consisting of fibers and superabsorbent particles. According to Cook et al., this means to increase the ability of liquid to permeate through an absorbent structure containing SAP particles. In doing this, Cook et al discloses at col 3, lines 54-65, that “an absorbent structure (or core) made from such fibers and SAP particles exhibits reduced gel blocking and increased core permeability.” Cook et al further discloses the SAP particles quickly absorb the fluid. This is directly contrary to the present invention as set forth in the current claims. The present invention, does not provide SAP particles that quickly absorb the fluid. The SAP particles of the present invention have a delayed free water absorption, and hence do not quickly absorb the fluid. The SAP particles of the present invention inhibit the initial entrance of the fluid into the superabsorbent particle to result in delayed free water absorption property of absorbing about 13 grams or less of water per gram of superabsorbent polymer in about 15 seconds.

Furthermore, Cook et al. specifically teaches away from the SAPs of the present invention. Cook et al at Col 8, lines 13-18 discloses “Suitable SAP particles for use in the present invention include those discussed above, and others, provided that the SAP particles provides improved permeability of an absorbent core made with the SAP and a hydrophilic fiber treated according to the present invention.”

In addition to the foregoing, Cook et al. specifically discloses the SAP is coated with a nonaqueous coating. The SAP of the present invention is coated with an aqueous coating. Cook et al. discloses at column 10, line 20, that “improved core permeability may be obtained by coating the surface of SAP particles with a polyvalent ion salt, and combining the coated

SAP particle with a fiber in an absorbent structure." Cook et al. further discloses the polyvalent ion is applied using a nonaqueous solution of the polyvalent ion salt, and combining the coated SAP particle with a fiber in an absorbent material. The particles are coated in contrast to reacting or complexing the SAP particles with polyvalent cation salt." Once again, Cook et al. discloses a coated superabsorbent polymer that is different from the present invention.

In view of the foregoing remarks, Cook et al. does not disclose the present invention. Claim 1 is patentable over Cook et al., and dependent Claims 3-9 are patentable over Cook et al. at least for the reasons regarding the independent Claim 1.

Claims 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. in view of U.S. Patent No. 5,338,766 to Phan et al. As discussed above, Cook et al. does not teach or suggest that the SAP is treated with the polyvalent ion-containing compound. Phan et al. also does not teach or suggest coating a SAP with a salt, as recited in independent Claim 10. Thus, Phan et al. does not make up for the deficiencies in Cook et al. and independent Claim 10 is patentable over Cook et al. in view of Phan et al. Dependent Claims 11-19 are patentable at least for the reasons regarding independent Claim 10.

In view of the forgoing, allowance of Claims 1 and 3-19 is hereby requested.

If the Examiner has any further questions, Applicants' Attorney would welcome a telephone call to resolve these questions.

Respectfully submitted,

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